

IN THE CLAIMS

Please amend claim 105, as shown below. The following listing of claims replaces all prior listings.

1-104. (Canceled).

105. (Currently amended) A method for delivering a protein into a cell *in vivo*, comprising:

(a) forming a plurality of protein-halide vesicles comprising a protein-protein-halide composition by combining the protein to be delivered and an organic halide incorporated in the core of the vesicles; and

(b) administering the protein-halide ~~composition~~ vesicles to the cell,

wherein the organic halide is selected from the group consisting of 1-bromo-nonafluorobutane, perfluorooctyl iodide, perfluorooctyl bromide, 1-chloro-1-fluoro-1-bromomethane, 1,1,1-trichloro-2,2,2-trifluoroethane, 1,2-dichloro-2,2-difluoroethane, 1,1-dichloro-1,2-difluoroethane, 1,2-dichloro-1,1,3-trifluoropropane, 1-bromoperfluorobutane, 2-iodo-1,1,1-trifluoroethane, 5-bromovaleryl chloride, 1,3-dichlorotetrafluoroacetone, 1-bromo-1,1,2,3,3,3-hexafluoropropane, 2-chloro-1,1,1,4,4,4-hexafluoro-2-butene, 2-chloropentafluoro-1,3-butadiene, iodotrifluoroethylene, 1,1,2-trifluoro-2-chloroethane, 1,2-difluorochloroethane, 1,1-difluoro-2-chloroethane, 1,1-dichlorofluoroethane, heptafluoro-2-iodopropane, bromotrifluoroethane, chlorotrifluoromethane, dibromofluoromethane, chloropentafluoroethane, bromochlorodifluoromethane, dichloro-1,1,2,2-tetrafluoroethane, 1,1,1,3,3-pentafluoropentane, perfluorotributylamine, perfluorotripropylamine, 2,2,2-trifluoroethylacrylate, 3-(trifluoromethoxy)-acetophenone, 1,1,2,2,3,3,4,4-octafluorobutane, 1,1,1,3,3-pentafluorobutane, 1-fluorobutane, 1,1,2,2,3,3,4,4-octafluorobutane, 1,1,1,3,3-pentafluorobutane, tetradecaperfluoroheptane, dodecaperfluorocyclohexane, perfluoromethane, perfluoroethane, perfluoropropane, perfluorobutane, perfluoropentane, perfluorohexane, perfluoroheptane,

perfluorooctane, perfluorononane, perfluorodecane, perfluorododecane, perfluoro-2-methyl-2-pentene, perfluorocyclohexane, perfluoropropylene, perfluorocyclobutane, perfluoro-2-butyne, perfluoro-2-butene, perfluorobuta-1,3-diene, perfluorobutylethyl ether, bis(perfluoroisopropyl) ether, bis(perfluoropropyl) ether, perfluoromethyl tetrahydrofuran, perfluoro t-butyl methyl ether, perfluoro isobutyl methyl ether; perfluoro n-butyl methyl ether, perfluoro isopropyl ethyl ether, perfluoro n-propyl ethyl ether, perfluoro cyclobutyl methyl ether, perfluoro cyclopropyl ethyl ether, perfluoro isopropyl methyl ether, perfluoro n-propyl methyl ether, perfluoro diethyl ether, perfluoro cyclopropyl methyl ether, perfluoro methyl ethyl ether, and perfluoro dimethyl ether,

wherein the path of administering of the protein-halide composition to the cell is selected from a group consisting of the administering through a cell membrane, cell wall, and nuclear membrane, or any combination thereof,

to achieve the intracellular delivery of the protein thereby.

106. (Previously presented) The method of claim 105, wherein the organic halide is selected from the group consisting of 1-bromo-nonafluorobutane, 1,1,1,3,3-pentafluoropentane, perfluorohexane, perfluorocyclohexane, 1-bromo-1,1,2,3,3,3-hexafluoropropane, heptafluoro-2-iodopropane, 1,1,2,2,3,3,4,4-octafluorobutane, 1-fluorobutane, tetradecaperfluorheptane, and dodecaperfluorocyclohexane.

107. (Previously presented) The method of claim 105, wherein the organic halide is selected from the group consisting of perfluorohexane and perfluorocyclohexane.

108. (Previously presented) The method of claim 105, wherein the protein is selected from the group consisting of albumin, collagen, polyarginine, polylysine, polyhistidine, γ -globulin, and β -globulin.

109. (Previously presented) The method of claim 105, wherein the protein is a cationic protein.

110. (Previously presented) The method of claim 109, wherein the cationic protein is selected from the group consisting of polylysine and polyethyleneimine.

111. (Withdrawn) The method of claim 105, further comprising applying ultrasound to the cell.

112. (Withdrawn) The method of claim 111, wherein the ultrasound is applied at a frequency between about 40 kHz and 25 MHz, and an energy level between about 500 mW/cm² and 10 W/cm².

113. (Withdrawn) The method of claim 111, wherein the ultrasound is applied at a frequency between about 200 kHz and 500 kHz, and the energy level is between about 200 mW/cm² and 500 W/cm².

114. (Withdrawn) The method of claim 111, wherein the ultrasound is applied at a frequency between about 1 MHz and 20 MHz, and the energy level is between about 100 W/cm² and 200 W/cm².

115. (Withdrawn) The method of claim 114, wherein the ultrasound is applied at a duty cycle between about 1% and 100% of the treatment time.

116. (Withdrawn) The method of claim 111, wherein the protein and the ultrasound are administered and applied simultaneously.